Macromodular Computer Design, Part 2, Volume 09, Faceplate Boxes, Types 5-10

Computer Systems Laboratory, Washington University

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MACROMODULAR  
COMPUTER DESIGN  
PART 2  
MANUFACTURING DESCRIPTION  

VOLUME IX  
FACEPLATE BOXES, TYPES 5-10  

Technical Report No. 38  

FINAL REPORT - FEBRUARY, 1974  
CONTRACT SD-302 (ARPA)  
COMPUTER SYSTEMS LABORATORY  
WASHINGTON UNIVERSITY  
ST. LOUIS, MISSOURI
Technical Report No. 38

PART 2 - MANUFACTURING DESCRIPTION
VOL. IX-FACEPLATE BOXES, TYPES 5-10

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Computer Systems Laboratory
Washington University
St. Louis, Missouri
ABSTRACT

This document contains the necessary procedures and wiring lists for the assembly of Macro-Module Faceplate Box types 5 through 10.
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 ISSUE   |            | 9/28/70  | 967       | A        | 0059       | 10/20/70 | 954        |
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# TYPE 5 FACEPLATE 80X

## PARTS LIST

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<td>300.5-5</td>
<td>FPB KEY</td>
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<td>ASTRO RECEPTACLE SHELL</td>
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<td>1</td>
<td>--</td>
<td>VLEIR MNS-51N SPRING PLUNGER</td>
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<td>3</td>
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<td>NO.2 SERRATED-HOLE SOLDER LUG</td>
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<td>3-16 X 2-56 FILLISTER HEAD SS MACHINE SCREW</td>
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<td>WIRE (SEE 305-10 IF FOR COLOR CODE)</td>
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<td>130 OHM 1/8 WATT 5% CARBON RESISTOR</td>
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<td>--</td>
<td>1/16 X 1-4 CADMIUM PLATED STEEL ROLL PIN</td>
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**MACROMODULAR SYSTEMS PROJECT**

305-2
INTRODUCTION

This document (305) describes the assembly of the Type 5 Faceplate Box. A list of all required parts, including sub-assemblies specified in other documents, is given on page 305-2. The general specification on wire preparation and wiring procedures (CSL Document 300.0) must be followed, together with the color code information supplied by the Type 5 Faceplate Box Wiring List (pages 305-10 ff).

ASSEMBLY PROCEDURE

A. Type 5 Faceplate Sub-subassembly (see page 305-9)

1. Screw the spring plunger into the faceplate until the tip of the plunger protrudes from the front surface of the faceplate by approximately 0.090 inch.

2. Mount the three ASTRO 348 receptacle shells via the ASTRO standoffs to the faceplate as shown on page 305-9 using 2-56 fillister head screws. NOTE THE ORIENTATION REQUIRED.

3. Install the roll pin in the lower right corner hole as shown, flush with the rear surface of the faceplate (protruding from the front surface approximately 1/16 inch).

B. Type 5 FPB Interwiring Sub-subassembly (see page 305-8)

1. Connectors D1, D2 and D3
Following the Type 5 Faceplate Box Wiring List, crimp the wire pairs and the nine resistors into the ASTRO 348 male contacts and insert the contacts into designated contact retention discs (pin numbering is stamped in the receptacle shell). Apply the interfacial seals and slip on the rear nuts.

2. Wire to the FPB rear connectors A3, and A4, together with three solder-lug leads.
C. Type 5 Visceral Subassembly (see page 305-7)

1. Mount the FPB rear connector filler strip on the two connector brackets with connector bracket screws, as shown on page (305-6). Note that the row of holes is not centered on the bracket. The bracket edge closest to the row of holes must face inward (towards the connector pins). NOTE CONNECTOR ORIENTATION REQUIRED.

2. Install the contact retention disc cable-head assemblies in the corresponding receptacle shells for D1, D2 and D3 (shown on page 305-9) and hand-tighten the ASTRO 348 Rear Nuts.

3. Attach the solder lugs to the receptacle shells as shown.

4. Mount FPB Rear Connector A4 to the connector brackets using connector bracket screws. NOTE CONNECTOR ORIENTATION REQUIRED.

5. Slip the FPB Key onto the connector brackets, and mount the FPB Rear Connector A3 using the two remaining connector bracket screws. NOTE THE ORIENTATION REQUIRED.

D. Final Assembly (see page 305-5)

1. Remove the four screws holding the top cover plate to the 1-cell FPB Shell struts and remove the top cover plate and the top overlay clip.

2. Slip the rear connector block of the Visceral Subassembly into the slots provided in the struts for the connector brackets, and attach the Faceplate to the front using the remaining 2-56 fillister head screws. NOTE THE ORIENTATION REQUIRED.

3. Reinstall the top overlay clip and attach the top cover plate, taking care to assure that the wires are not pinched.

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FPB CONNECTOR BRACKET

FPB REAR CONNECTOR A3

FPB KEY

FPB REAR CONNECTOR FILLER STRIP

FPB REAR CONNECTOR A4

KEY TAB EXTENDS LEFTWARDS

NOTE ORIENTATION OF EACH PART
TYPE 5 FACEPLATE SUB-SUBASSEMBLY
(SEE PAGE 305-9)

FPB REAR CONNECTOR A3

FPB KEY

FPB REAR CONNECTOR A4

FPB REAR CONNECTOR FILLER STRIP

TYPE 5 FPB INTERWIRING SUB-SUBASSEMBLY (SEE PAGE 305-8)

FPB CONNECTOR BRACKET

FPB CONNECTOR BRACKET SCREWS

COMPUTER SYSTEMS LABORATORY
WASHINGTON UNIVERSITY
ST. LOUIS, MISSOURI

MACROMODULAR PROJECT

A 10-20-70 E.C.O.0059

MACROMODULAR PROJECT

CLAIM 40 DATE DESCRIPTION

APPROVED DATE

ENG. 305-7

MACRO 305-7
NOTE ORIENTATION

TYPE 5 FACEPLATE

ROLL PIN SUNK FLUSH WITH REAR SURFACE

ASTRO STANDOFF

SPRING PLUNGER

ASTRO 348 RECEPTACLE SHELLS

COMPUTER SYSTEMS LABORATORY
WASHINGTON UNIVERSITY
ST. LOUIS, MISSOURI

MACROMODULAR PROJECT

ISSUE 9-28-70 931

TITLE TYPE 5 FACEPLATE SUB-SUBASSEMBLY

DRAWING NO 305-9

DATE 9-2-70

DRAWN BY PLL
FPT5WL.1  LN=1

[FPT5C]
[FACEPLATE TYPE 5 WIRING LIST]
[

>>>>>>>>>>>>>>>>>
#
 1A3 [SIX INCH WIRE WITH GROUND LUG
[CONNECT TO D1]
#

>>>>>>>>>>>>>>>>>
 2A3 [SIX INCH WIRE WITH GROUND LUG
[CONNECT TO D2]
#

>>>>>>>>>>>>>>>>>

3A3
24D1 [ ORANGE
#

4A3
23D1 [ RED
#

>>>>>>>>>>>>>>>>>

5A3
33D1 [ BLUE
#

6A3
32D1 [ RED
#

>>>>>>>>>>>>>>>>>

7A3
31D1 [ SLATE
#

8A3
30D1 [ YELLOW
#

>>>>>>>>>>>>>>>>>

9A3
37D1 [ ORANGE
#

10A3
36D1 [ YELLOW
#

>>>>>>>>>>>>>>>>>

11A3
24D2 [ ORANGE
#

12A3
23D2 [ RED
#

>>>>>>>>>>>>>>>>>

13A3
33D2 [ BLUE
#

14A3
32D2 [ RED
#

>>>>>>>>>>>>>>>>>

15A3
31D2 [ SLATE

CHG.  E.C.O.  DATE  APPR.
ISSUE    -  9/28/70  

305-10
# 32A3
16D2 [ YELLOW
#
>>>>
33A3
28D2 [ SLATE
#
34A3
27D2 [ WHITE
#
>>>>
35A3
26D2 [ BROWN
#
36A3
25D2 [ RED
#
>>>>
37A3 [NO CONNECTION
#
>>>>
38A3 [NO CONNECTION
#
>>>>
39A3
9D1 [ ORANGE
#
40A3
8D1 [ WHITE
#
>>>>
41A3
15D1 [ GREEN
#
42A3
14D1 [ RED
#
>>>>
43A3
13D1 [ GREEN
#
44A3
12D1 [ WHITE
#
>>>>
45A3
11D1 [ BROWN
#
46A3
10D1 [ WHITE
#
>>>>
47A3
9D2 [ ORANGE
#
48A3
# >>>>>>>>>>>>>>>>>>>
66A3 [NO CONNECTION]
#
# >>>>>>>>>>>>>>>>>>>
67A3 [NO CONNECTION]
#
# >>>>>>>>>>>>>>>>>>>
68A3 [NO CONNECTION]
#
# >>>>>>>>>>>>>>>>>>>
69A3 [NO CONNECTION]
#
# >>>>>>>>>>>>>>>>>>>
70A3 [NO CONNECTION]
#
# >>>>>>>>>>>>>>>>>>>
71A3
6D1 [ VIOLET]
#
72A3
7D1 [ ORANGE]
#
# >>>>>>>>>>>>>>>>>>>
73A3
6D2 [ VIOLET]
#
74A3
7D2 [ ORANGE]
#
# >>>>>>>>>>>>>>>>>>>
75A3
29D2 [ GREEN]
#
# >>>>>>>>>>>>>>>>>>>
76A3
29D1 [ GREEN]
#
# >>>>>>>>>>>>>>>>>>>
[FOUR WIRES ARE SOLDERED TO PIN 77A3
77A3
5D1 [ YELLOW
5D2 [ YELLOW
5D3 [ YELLOW
90A4
# >>>>>>>>>>>>>>>>>>>
[PINS 76A3 THROUGH 90A3 INCLUSIVE HAVE NO CONNECTION
[
[ONLY EVEN NUMBERED PINS OF CONNECTOR A4 ARE USED WITH THE
EXCEPTIONS OF 1A4 AND 5A4. ALL OTHER ODD NUMBERED PINS ARE
[NO CONNECTION.
[
# 1A4
22D3 [ BLUE
# >>>>>>>>>>>>>>>>>>>
FPT5WL.6  LN=434

2A4
24D3 [ ORANGE
#
4A4
23D3 [ RED
#
>------------------
5A4 [SIX INCH WIRE WITH GROUND LUG
CONNECT TO D3
#
>------------------
6A4
33D3 [ BLUE
#
8A4
32D3 [ RED
#
>------------------
10A4
31D3 [ SLATE
#
12A4
30D3 [ YELLOW
#
>------------------
14A4
37D3 [ ORANGE
#
16A4
36D3 [ YELLOW
#
>------------------
18A4
21D3 [ BROWN
#
20A4
20D3 [ YELLOW
#
>------------------
22A4
17D3 [ GREEN
#
24A4
16D3 [ YELLOW
#
>------------------
26A4
28D3 [ SLATE
#
28A4
27D3 [ WHITE
#
>------------------
30A4
26D3 [ BROWN
#
32A4

305-15
25D3 [ RED
#
>>>>>>>>>>>>>>>>>>>>
34A4
9D3 [ ORANGE
#
36A4
8D3 [ WHITE
#
>>>>>>>>>>>>>>>>>>>>
38A4
15D3 [ GREEN
#
40A4
14D3 [ RED
#
>>>>>>>>>>>>>>>>>>>>
42A4
13D3 [ GREEN
#
44A4
12D3 [ WHITE
#
>>>>>>>>>>>>>>>>>>>>
46A4
11D3 [ BROWN
#
48A4
10D3 [ WHITE
#
>>>>>>>>>>>>>>>>>>>>
50A4
18D3 [ VIOLET
#
52A4
19D3 [ BLUE
#
>>>>>>>>>>>>>>>>>>>>
54A4
6D3 [ VIOLET
#
56A4
7D3 [ ORANGE
#
>>>>>>>>>>>>>>>>>>>>
[PINS 58A4 THROUGH 88A4 INCLUSIVE ARE NO CONNECTION.]
[
90A4 [SEE 77A3
#
>>>>>>>>>>>>>>>>>>>>
[THE FOLLOWING ARE RESISTORS WITH THEIR LEADS CRIMPED DIRECTLY INTO THE INDICATED CONNECTOR CONTACTS. THE LEADS SHALL BE COVERED BY TEFLON SLEEVING, AND THE COLOR CODE MAY BE IGNORED.]
[
1R601
]
305-16
# 2R609
   3503 ( BLUE
#
   >>>>>>>>>>>>>>>>
[
[END OF WIRING LIST
[
[
[FPT5WL
[GERALD C JOHNS
[ 2 OCTOBER 1970
# TYPE 6 FACEPLATE BOX

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<td>TYPE 6 FPB REAR CONNECTOR BLOCK - ASSEMBLY ORIENTATION</td>
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<td>VLIER #NS-51N SPRING PLUNGER</td>
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<td>22</td>
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<td>3/16 x 2-56 FILLISTER HEAD SS MACHINE SCREW</td>
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<td>WIRE (SEE 306-11 IF FOR COLOR CODE)</td>
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<td>AMPHENOL 31-223 TWIN BNC CONNECTORS</td>
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<td>3/8INCH SOLDER LUG</td>
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ISSUE | - | 1-25-72 | CAM | | | | | | | | | |

MACROMODULAR SYSTEMS PROJECT
306-2
INTRODUCTION

This document (306) describes the assembly of the Type 6 Faceplate Box. A summary list of all required parts, including subassemblies specified in other documents, is given on page 306-2. The general specification on wire preparation and wiring procedures (CSL Document 300.0) must be followed, together with the color code information supplied by the Type 6 Faceplate Box Wiring List (pages 306-11 ff).

ASSEMBLY PROCEDURE

A. Type 6 Faceplate Sub-subassembly (see page 306-9)

1) Crimp-wire the set of eight coaxicon control connectors and press the resulting pre-wired connectors into the faceplate in the locations shown on page 306-9, taking care to assure that after installation the connectors will accept a mating coaxicon plug without binding. NOTE THE ORIENTATION REQUIRED.

2) Screw the spring plunger into the faceplate until the tip of the plunger protrudes from the front surface of the faceplate by approximately 0.090 inch.

3) Mount the three coax connectors with solder lugs to the faceplate as shown on page 306-9. The lock-washers are to be placed in the counterbored hole in the front of the faceplate before inserting the connector. NOTE THE ORIENTATION REQUIRED.

B. Type 6 FPB Interwiring Sub-subassembly (see page 306-8)

1) Jumper the Type 6 Function Code Switch Sub-assembly and wire to the FPB Rear Connector A3.

C. Type 6 Visceral Subassembly (see page 306-7)

1) Mount the Function Code Switch Subassembly on the faceplate using two 2-56 fillister head screws. The sense pins must operate freely.
2) Wire the leads from the coaxicon control connectors and the coax connectors to the FPB Rear Connector A3.

3) Wire coax connectors.

4) Rear connector block:
   Slip the FPB Key onto the V-Bus Subassembly connector brackets, and mount the FPB Rear Connector A3 using the two connector bracket screws.  **NOTE THE ORIENTATION REQUIRED** (page 306-6).

**D. Final Assembly (see page 306-5)**

1) Remove the four screws holding the top cover plate to the 1-cell FPB Shell struts and remove the top cover plate and the top overlay clip.

2) Slip the rear connector block of the Visceral Subassembly into the slots provided in the struts for the connector brackets, and attach the Faceplate to the front using the remaining 2-56 fillister head screws.  **NOTE THE ORIENTATION REQUIRED.**

3) Reinstall the top overlay clip and attach the top cover plate, taking care to assure that the wires are not pinched.
NOTE ORIENTATION

1-CELL FPB SHELL

TOP OVERLAY CLIP

MOUNTING SCREWS

TYPE 6 FPB VISCERAL SUBASSEMBLY
(SEE PAGE 306-7)
NOTE ORIENTATION
(KP TAB EXTENDS RIGHTWARD)

COMPUTER SYSTEMS LABORATORY
WASHINGTON UNIVERSITY
ST. LOUIS, MISSOURI

MACROMODULAR PROJECT

TITLE
TYPE 6 FPB REAR CONNECTOR
BLOCK-ASSEMBLY ORIENTATION

ISSUE 1-27-72

CHANGE NO. DATE DESCRIPTION

APPROVED

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FUR

DRAWING NO.

306-6

CEM

PROD. 2-3-72

DRAWN BY

MBP

CHECKED

DATE 1-27-72

CEM

2-3-72

CEM

2-3-72

CEM

2-3-72
TYPE 1 FPB FUNCTION CODE SWITCH SUBASSEMBLY

FPB REAR CONNECTOR A4

COMPUTER SYSTEMS LABORATORY
WASHINGTON UNIVERSITY
ST. LOUIS, MISSOURI

MACROMODULAR PROJECT

TITLE
TYPE 6 FPB FUNCTION CODE
WIRING SUB-SUBASSEMBLY

ISSUE 1-27-72
CHANGE NO. DATE DESCRIPTION

COMMENTS

APPROVED ENG FOR DATE DRAWING NO.
CEN PROD. 2-3-72 MAP 306-8

CHECKED DATE
FUR 1-27-72
NOTE ORIENTATION

SPRING PLUNGER
SOLDER LUG
COAX CONNECTORS
TYPE 6 FACEPLATE

PRESS FIT PREWIRED CONTROL CONNECTORS

NOTE ORIENTATION

V1 G1 V2 G3 G5 G7
G2 G4 G6 G8
(S1) (S2) (S3) (S4) (S5)

COMPUTER SYSTEMS LABORATORY
WASHINGTON UNIVERSITY
ST. LOUIS, MISSOURI

MACROMODULAR PROJECT

TITLE
TYPE 6 FACEPLATE SUB-SUBASSEMBLY

DRAWING NO.

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ENG.
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PROD.

CHANGE
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DATE
DESCRIPTION

MACROMODULAR PROJECT

ISSUE 1-28-72

DATE

CHECKED

DATE
1-23-72

306-9

MACROMODULAR PROJECT

ISSUE 1-28-72

DATE

CHECKED

DATE
1-23-72

306-9
PIN 3 IS GROUND UNDER CRIMP FERRULE

PIN 1

PIN 2

SOLDER LUG

PIN 3 IS SOLDER LUG

PIN 1
MALE

PIN 2
FEMALE

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1A3 [NO CONNECTION]
2A3
3V1 [BLUE]
3A3 [NO CONNECTION]
4A3 [NO CONNECTION]
5A3
1V1 [WHITE]
6A3
2V1 [GREEN]
7A3 [NO CONNECTION]
8A3 [NO CONNECTION]
9A3 [NO CONNECTION]
10A3
3V2 [BLUE]
11A3 [NO CONNECTION]
12A3 [NO CONNECTION]
13A3
1V2 [RED]
14A3
2V2 [ORANGE]
15A3
3G5 [BLUE]
16A3
3G1 [BLUE]
FPT6WL, 3 LN=163

3G6 [ BLUE
#
>>>>>>>>>>>>>>>>
33A3
2S5 [ BLUE
#
>>>>>>>>>>>>>>>>
34A3
3G2 [ BLUE
#
>>>>>>>>>>>>>>>>
35A3
3S2 [ RED
#
>>>>>>>>>>>>>>>>
36A3 [ NO CONNECTION
#
>>>>>>>>>>>>>>>>
37A3
3S3 [ RED
#
>>>>>>>>>>>>>>>>
56A3
2S1 [ RED
#
[PINS 38A3 THROUGH 55A3 INCLUSIVE ARE NO CONNECTION
>>>>>>>>>>>>>>>>
58A3
3G8 [ BLUE
#
>>>>>>>>>>>>>>>>
59A3
1G8 [ YELLOW
#
60A3
2G8 [ GREEN
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>>>>>>>>>>>>>>>>
61A3
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1S2 [YELLOW
1S3 [YELLOW
1S4 [YELLOW
1S5 [YELLOW
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FPT6WL, 4 LN=254

66A3
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[27 DECEMBER 1971
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# TYPE 7 FACEPLATE BOX

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<td>PARTS LIST</td>
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MACROMODULAR SYSTEMS PROJECT

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MACROMODULAR SYSTEMS PROJECT
INTRODUCTION AND ASSEMBLY PROCEDURE

Introduction

This document (307) describes the assembly of the type 7 Faceplate box. A summary list of all required parts, including subassemblies specified in other documents, is given on page 307-2.

Assembly Procedure

1) Screw the spring plunger into the faceplate until the tip of the plunger protrudes from the front surface of the faceplate by approximately .090 inch.

2) Onto the V-Bus Subassembly mount the type 7 FPB rear connector filler strip using the two connector bracket screws. Note the orientation required.

3) Remove the four screws holding the top cover plate to the 1-cell FPB shell struts and remove the top cover plate and the overlay clip.

4) Slip the V-bus subassembly into the slots provided in the struts for the connector brackets, and attach the Faceplate to the front using the four 2-56 fillister head screws. Note the orientation required.

5) Reinstall the top overlay clip and top cover plate.
# TYPE 8 FACEPLATE BOX

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MACROMODULAR SYSTEMS PROJECT
### TYPE 8 FACEPLATE BOX
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MACROMODULAR SYSTEMS PROJECT

308-2
INTRODUCTION AND ASSEMBLY PROCEDURE

Introduction

This document (308) describes the assembly of the type 8 Faceplate box. A summary list of all required parts, including subassemblies specified in other documents, is given on page 308-2.

Assembly Procedure

1) Screw the spring plunger into the faceplate until the tip of the plunger protrudes from the front surface of the faceplate by approximately .090 inch.

2) Remove the four screws holding the top cover plate to the 1-cell FPB shell struts and remove the top cover plate and the overlay clip.

3) Slip the type 8 FPB filler into the slots provided in the struts and attach the Faceplate to the front using the four 2-56 fillister head screws. Note the orientation of the Faceplate.

4) Reinstall the top overlay clip and the top cover plate.
# TYPE 9 FPB

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MACROMODULAR SYSTEMS PROJECT
# TYPE 9 FACEPLATE BOX
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MACROMODULAR SYSTEMS PROJECT

309-2
INTRODUCTION

This document (309) describes the assembly of the Type 9 Faceplate Box. A summary list of all required parts, including subassemblies specified in other documents, is given on page 309-2. The general specification on wire preparation and wire procedures (CSL Document 300.0) must be followed, together with the color code information supplied by the wire lists for the Type 9 Box (pages 309-13 ff).

ASSEMBLY PROCEDURE

A. Type 9 Faceplate Subassembly

1) Following the table on page 309-13, crimp wire pairs into the coaxicon connectors.
2) Press the coaxicon connectors into the faceplate as shown in page 309-8. Note the orientation.
3) Screw the spring plunger into the faceplate until the tip protrudes approximately 0.090 inch from the front surface. Lock the plunger in place with a 8-32 hex nut.
4) Preparation of the Circuit Board Subassembly:
   a) Insert and solder twenty-four blue wires to the circuit board as shown on page 309-10. Push stripped wire into hole until insulation is flush with solder pad. Bend wire end over onto the pad, and solder. Cut off any extra.
   b) Using 2-56 fillister head screws, attach four ASTRO standoffs loosely to the blank side of the circuit board - DO NOT TIGHTEN:
   c) Insert two light emmitting diodes from the blank side so that the lead with the double shoulder (see page 309-12) protrudes through the hole marked “X”. DO NOT SOLDER YET.
   d) With the assembly jig held in a vise as shown in page 309-9, fit the circuit board up to the jig by placing the standoffs in the appropriate holes. Be sure that the LED’s are lined up with the two holes in the jig marked “X”.
   e) Tighten the four screws, and then solder the LED’s in place. Be sure that both leads of an LED protrude at least 0.025 inch - that is equal to the width of the lead.

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NOTE:

In production, it may be easier to tighten the screws with the jig laying on a flat surface - before the LED's are inserted. Then mount the jig in a vise and mount the LED's.

f) Insert the five data modules into the circuit board. Mate the assembly jig to the circuit board subassembly and set it down on a flat surface. Solder the data modules to the board.

5) Mount the circuit board subassembly to the faceplate with four 2-56 fillister head screws.

6) Insert the polarizing key between contacts 6 and 7 in the Viking connector. Mount the Viking connector as shown on page 309-6. Use two 4-40 x 3/8 binder head screws to hold the connector to the struts. Use six 2-56 fillister head screws to hold the strut covers to the struts and to hold the struts to the faceplate. NOTE: insert all eight screws loosely before tightening any one of them, then tighten the strut covers first.

7) Following the list on page 309-16, solder the eight wire pairs and two single wires to the Viking connector. The wires must be soldered to the contacts as shown on pages 309-6 and 309-11.

8) Solder two wires to the code switch according to the list on page 309-17. Mount the code switch subassembly to the faceplate with two 2-56 x 3/16 fillister head screws.

B. Type 9 FPB Interwiring Subassembly

Following the type 9 Faceplate Box Wiring List on pages 309-18-ff, make all connections indicated to the FPB rear connector A3. Use shrink tubing on each connection.

C. Final Assembly

1) Slip the FPB key onto the V-Bus subassembly connector brackets, and mount the FPB rear connector A3 using the two bracket screws. Note the orientation of the key and connector shown on page 309-6.

2) Remove the four screws holding the top cover plate to the 1-cell FPB shell struts, and remove the top cover plate and overlay clip.

3) Slip the rear connector bracket into the slots provided in the struts and attach the faceplate to the front using four 2-56 fillister head screws.

4) Replace top cover plate and overlay clip being careful not to pinch any wires.
NOTE ORIENTATION OF COAXICONS (15)

LED

VIKING POLARIZING KEY

DATA MODULE (5)
PC BOARD ASSEMBLY JIG (PART NO. 903)
SHRINK TUBING MUST BE CUT EVEN WITH TOP OF PINS

AFTER SOLDERING WIRES MUST BE PLACED DOWN THE PIN AND BROUGHT OUT LYING FLAT ON THE CONNECTOR

Wires from pins on Row B must be placed between pins on Row A.

NOTE:
When soldering care must be taken not to injure the wire insulation placed between the pins on Row A.
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INDEX NOTCH
DOUBLE SHOULDER

RJA

DATE: 6-15-73

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G-LIST, LN=1

WIRE LIST FOR COAXICONS
[
>>>>
3G15 [ BLUE
>>>>
3G14 [ BLUE
>>>>
3G13 [ BLUE
>>>>
2G1 [ BLUE
1G1 [ WHITE
>>>>
2G7 [ ORANGE
1G7 [ YELLOW
>>>>
2G4 [ BROWN
1G4 [ WHITE
>>>>
2G10 [ ORANGE
1G10 [ RED
>>>>
2G13 [ SLATE
1G13 [ RED
>>>>
3G12 [ BLUE
>>>>
3G11 [ BLUE
>>>>
1G12 [ RED
2G12 [ BROWN
>>>>
1G15 [ YELLOW
2G15 [ ORANGE
>>>>
1G9 [ RED
2G9 [ BLUE
>>>>
1G6 [ YELLOW
2G6 [ BLUE
>>>>
3G10 [ BLUE
>>>>
1G3 [ WHITE
2G3 [ GREEN
>>>>
1G11 [ RED
2G11 [ GREEN
>>>>
1G14 [ YELLOW
2G14 [ BLUE
>>>>
1G8 [ YELLOW
2G8 [ GREEN
>>>>
1G5 [ WHITE
2G5 [ SLATE
>>>>
]

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<td>6-15-73</td>
<td>RJ A</td>
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309-13
G-LIST.2  LN=72

162 C WHITE
262 C ORANGE
>>>>>>>>>>>>>>>>>
369 C BLUE
>>>>>>>>>>>>>>>>>
368 C BLUE
>>>>>>>>>>>>>>>>>
367 C BLUE
>>>>>>>>>>>>>>>>>
366 C BLUE
>>>>>>>>>>>>>>>>>
365 C BLUE
>>>>>>>>>>>>>>>>>
364 C BLUE
>>>>>>>>>>>>>>>>>
363 C BLUE
>>>>>>>>>>>>>>>>>
362 C BLUE
>>>>>>>>>>>>>>>>>
361 C BLUE
>>>>>>>>>>>>>>>>>

E

EG-LIST
H-List, 1  LN=1

[Wire List for Circuit Board Holes]

12H CBLUE
17H CBLUE
21H CBLUE
8H CBLUE
9H CBLUE
22H CBLUE
13H CBLUE
18H CBLUE
5H CBLUE
4H CBLUE
10H CBLUE
15H CBLUE
19H CBLUE
6H CBLUE
7H CBLUE
20H CBLUE
11H CBLUE
16H CBLUE
2H CBLUE
1H CBLUE
24H CBLUE
23H CBLUE
14H CBLUE
3H CBLUE

CH=LIST

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<td>6-15-73</td>
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309-15
V-LIST, LN=1

WIRE LIST FOR VIKING CONNECTOR

2AV C WHITE
2BV C BLUE

1AV C VIOLET
1BV C ORANGE

7AV C YELLOW
7BV C BLUE

4AV C YELLOW
4BV C BROWN

3AV C RED
3BV C SLATE

8AV C WHITE
8BV C SLATE

9BV C BLUE
9AV C WHITE

10BV C GREEN
10AV C WHITE

5AV C YELLOW

5BV C YELLOW
S-LIST, LN=1

WIRE LIST FOR CODE SWITCH

2S1 [BLUE
  [NORMALLY OPEN
  [LABELED "NO"

1S1 [YELLOW
  [COMMON
  [LABELED "C"

CS-LIST

<table>
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<td>6-15-73</td>
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309-17
TYPE 9 FACEPLATE WIRING LIST

# >>>>>>>>>>>>>>>>>>>>>>
1A3  
12H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
2A3  
17H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
3A3  
21H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
4A3  
8H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
5A3  
9H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
6A3  
22H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
7A3  
13H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
8A3  
18H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
9A3  
5H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
10A3 
4H CBLUE
# >>>>>>>>>>>>>>>>>>>>>>
11A3 
2AV C WHITE
# 12A3  
2BV C BLUE
# >>>>>>>>>>>>>>>>>>>>>>
13A3 
1AV C VIOLET
# 14A3  
18V C ORANGE

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<td>6-15-73</td>
<td>R JA</td>
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309-18
# 30A3
# 3BV [ SLATE
# >>>>>>>>>>>>>>>>>>>>
# 31A3
# 3G15 [ BLUE
# >>>>>>>>>>>>>>>>>>>>
# 32A3
# 3G14 [ BLUE
# >>>>>>>>>>>>>>>>>>>>
# 33A3
# 8AV [ WHITE
# 34A3
# 8BV [ SLATE
# >>>>>>>>>>>>>>>>>>>>
# 35A3
# 2S1 [ BLUE
# >>>>>>>>>>>>>>>>>>>>
# 36A3
# 3G13 [ BLUE
# >>>>>>>>>>>>>>>>>>>>
# 37A3
# 24H [ BLUE
# >>>>>>>>>>>>>>>>>>>>
# 38A3
# 23H [ BLUE
# >>>>>>>>>>>>>>>>>>>>
# 39A3
# 2G1 [ BLUE
# 40A3
# 1G1 [ WHITE
# >>>>>>>>>>>>>>>>>>>>
# 41A3
# 2G7 [ ORANGE
# 42A3
# 1G7 [ YELLOW
# >>>>>>>>>>>>>>>>>>>>
# 43A3
# 2G4 [ BROWN
# 44A3
# 1G4 [ WHITE
# >>>>>>>>>>>>>>>>>>>>
<table>
<thead>
<tr>
<th>Color</th>
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<th>Value</th>
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<tr>
<td>ORANGE</td>
<td>45A3</td>
<td>2610</td>
</tr>
<tr>
<td>RED</td>
<td>46A3</td>
<td>1610</td>
</tr>
<tr>
<td>SLATE</td>
<td>47A3</td>
<td>2613</td>
</tr>
<tr>
<td>RED</td>
<td>48A3</td>
<td>1613</td>
</tr>
<tr>
<td>BLUE</td>
<td>49A3</td>
<td>3612</td>
</tr>
<tr>
<td>BLUE</td>
<td>50A3</td>
<td>3611</td>
</tr>
<tr>
<td>RED</td>
<td>51A3</td>
<td>1612</td>
</tr>
<tr>
<td>BROWN</td>
<td>52A3</td>
<td>2612</td>
</tr>
<tr>
<td>YELLOW</td>
<td>53A3</td>
<td>1G15</td>
</tr>
<tr>
<td>YELLOW</td>
<td>54A3</td>
<td>2G15</td>
</tr>
<tr>
<td>ORANGE</td>
<td>55A3</td>
<td>1G9</td>
</tr>
<tr>
<td>RED</td>
<td>56A3</td>
<td>2G9</td>
</tr>
<tr>
<td>BLUE</td>
<td>57A3</td>
<td>1G6</td>
</tr>
<tr>
<td>YELLOW</td>
<td>58A3</td>
<td>2G6</td>
</tr>
<tr>
<td>BLUE</td>
<td>59A3</td>
<td>3G10</td>
</tr>
<tr>
<td>NO CONNECTION</td>
<td>60A3</td>
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</table>
FPT9WL.5 LN=345

61A3
1G3 C WHITE
#
62A3
2G3 C GREEN
#
63A3
9BV C BLUE
#
64A3
9AV C WHITE
#
65A3
10BV C GREEN
#
66A3
10AV C WHITE
#
67A3
1611 C RED
#
68A3
2G11 C GREEN
#
69A3
1614 C YELLOW
#
70A3
2G14 C BLUE
#
71A3
168 C YELLOW
#
72A3
2G8 C GREEN
#
73A3
1G5 C WHITE
#
74A3
2G5 C SLATE
#
75A3
1G2 C WHITE
#
76A3
2G2 C ORANGE
#
[THREE WIRES ARE SOLDERED TO PIN 77A3]
FPT9WL.6  LN=436

77A3
14H c BLUE
5AV c YELLOW
5BV c YELLOW
# >>>>>>>>>>>>>>>>>>>>
78A3  CNO CONNECTION
#

# >>>>>>>>>>>>>>>>>>>>
79A3
369 c BLUE
# >>>>>>>>>>>>>>>>>>>>
80A3
368 c BLUE
#
# >>>>>>>>>>>>>>>>>>>>
CTWO WIRES ARE SOLVERED TO PIN 81A3
81A3
1S1 c YELLOW
3H c BLUE
#

# >>>>>>>>>>>>>>>>>>>>
82A3
367 c BLUE
#

# >>>>>>>>>>>>>>>>>>>>
83A3
366 c BLUE
#

# >>>>>>>>>>>>>>>>>>>>
84A3
365 c BLUE
#

# >>>>>>>>>>>>>>>>>>>>
85A3
364 c BLUE
#

# >>>>>>>>>>>>>>>>>>>>
86A3
363 c BLUE
#

# >>>>>>>>>>>>>>>>>>>>
87A3
362 c BLUE
#

# >>>>>>>>>>>>>>>>>>>>
88A3
361 c BLUE
#

# >>>>>>>>>>>>>>>>>>>>
89A3  CNO CONNECTION
#

# 90A3  CNO CONNECTION
#

# >>>>>>>>>>>>>>>>>>>>
CFPT9WL
## TYPE 10 FACEPLATE BOX

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<td>310-2</td>
<td>Parts List</td>
<td></td>
</tr>
<tr>
<td>310-3</td>
<td>Introduction - Assembly Procedures</td>
<td></td>
</tr>
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<td>310-5</td>
<td>Type 10 Faceplate Box Assembly</td>
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</tr>
<tr>
<td>310-6</td>
<td>Type 10 Faceplate Sub-subassembly Front View</td>
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<td>310-7</td>
<td>Type 10 Faceplate Sub-subassembly Rear View</td>
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<td>310-8</td>
<td>Wiring Instructions: Viking Connectors F1, F2</td>
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<td>310-9</td>
<td>Type 10 Faceplate-connector Orientation</td>
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<td>310-10</td>
<td>Type 10 FPB Rear Connector Block Assemblies</td>
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<td>310-12</td>
<td>Type 10 FPB Wiring List</td>
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MACROMODULAR SYSTEMS PROJECT
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<td>300.2</td>
<td>2 Cell FPB Shell</td>
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<td>2</td>
<td>300.5-2</td>
<td>FPB Connector Bracket</td>
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<td>6</td>
<td>300.5-3</td>
<td>Connector Bracket Screws</td>
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<td>24</td>
<td>300.5-4</td>
<td>Astro Standoff</td>
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<tr>
<td>1</td>
<td>300.5-5</td>
<td>FPB Key</td>
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<td>1</td>
<td>300.5-6</td>
<td>V-Bus Subassembly</td>
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<td>Connector Strut Type 1</td>
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<td>Connector Strut Type 2</td>
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<td>300.5-21</td>
<td>Strut Cover</td>
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<td>300.5-22</td>
<td>Interlock Pin</td>
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<td>300.5-23</td>
<td>Type 10 Filler Strip</td>
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<td>Type 10 FPB Overlay</td>
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<td>300.5-25</td>
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<td>Astro 348-7012-1 Connector</td>
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<td>Viking Connector No. 3VH10/1JN5</td>
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<td></td>
<td>Switches CK7101 with Lock Nuts and Lock Washers</td>
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<td>Monsanto No. MV5023 Light Emitting Diodes with Mounting Hardware</td>
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<td>4</td>
<td></td>
<td>4-40 x 3/8Binder Head Screw</td>
</tr>
<tr>
<td>88</td>
<td></td>
<td>2-56 x 3/16Fillister Head S.S. Machine Screws</td>
</tr>
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<td></td>
<td>H.H. Smith No. 1412-4 Locking Terminal Lug</td>
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<tr>
<td></td>
<td></td>
<td>Wire (See 301-10 ff for Color Code)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/16 inch Shrink Tubing</td>
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<td>222</td>
<td></td>
<td>Astro Male Contacts</td>
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<tr>
<td>2</td>
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<td>Viking Polarizing Key No. 091-0071-000</td>
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MACROMODULAR SYSTEMS PROJECT
INTRODUCTION

This document (310) describes the assembly of the Type 10 Faceplate Box. A summary list of all required parts, including subassemblies specified in other documents, is given on page 310-2.

The general specification on wire preparation and wiring procedures (CSL Document 300.0) must be followed together with the color code information supplied by the wire lists for the Type 10 FPB. (Pages 310-12 thru 310-24).

ASSEMBLY PROCEDURES

A. Type 10 Faceplate Sub-subassembly

1. Install a Viking Polarizing key between pins 8 and 9 in each of the Viking connectors (No. 3VH10/1JN5) as shown in drawing No. 310-7. Mount Viking Connectors onto a Type 1 and Type 2 Connector Strut as shown in drawing Nos. 310-8 and 310-10, using 4-40 x 3/8 screws. (Note the orientation of struts and connectors.) Mount Strut Covers (part No. 300.5-21) using two 2-56 x 3/16 screws for each cover. (See drawing Nos. 310-10 and 310-8.) Place the Interlock Pin (part No. 300.5-22) into the two Type 2 Connector Struts. (See drawing No. 310-8). Mount assemblies onto Type 10 Faceplate using 2-56 x 3/16 screws as shown in drawing No. 310-7.

2. Mount Astro Standoffs (part No. 300.5-4) onto Type 10 Faceplate (part No. 300.5-25) using 2-56 x 3/16 screws (see drawing No. 310-10). Apply a small quantity of Locktite to each of these screws before assembly and tighten firmly. Mount Astro Connectors No. 348-7012-1 and ground lugs on to Astro Standoffs using 2-56 x 3/16 screws. (See drawing No. 310-8 for correct orientation of ground lugs and connectors).

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<tr>
<td>Issue</td>
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<td>5-29-73</td>
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</table>

310-3
3. Thread switches (No. CK7101) with lock nuts and lock washers into Type 10 Faceplate as shown in drawings 310-8 and 310-10. Switch lever must protrude approximately .130 inch. (See drawing No. 310-7). Securely tighten the lock nut and washer against the Type 10 faceplate. At this time check for free operation of switches.

4. Remove the backing from the Type 10 Faceplate Overlay (part No. 300.5-24) exposing the adhesive. Place on Type 10 Faceplate as shown in drawing No. 310-6, carefully aligning all holes.

5. Two LED retention flanges should now be pressed by hand into the specified holes (drawing No. 310-6) with the flanges to the front. The two LEDs shall then be inserted into the retention flanges from the rear until they snap securely into place, with Pin 1 and Pin 2 aligned horizontally. Pin 1, or the double shouldered lead, shall be placed on the left side of the Type 10 Faceplate as viewed from the front. The next step is to press on the rear locking ring. This is done by centering it over the rear of the retention flange and pressing straight down until the ring touches the metal surface. (Notice the locking ring is tapered. The ring must be installed with the large end down toward the metal.)

B. Type 10 FPB Interwiring Sub-subassembly

1. Connectors D1, D2, D3, D4, D5, D6

Following the Type 10 FPB Wiring List, crimp the wire pairs in the Astro 348 male contacts and insert the contacts into the Astro 348 connector following the directions supplied with the connectors. Terminate the free end of these wires to their respective terminals on connectors A3 and A5. Connectors A3 and A5 are not as yet mechanically attached to any mounting hardware.

C. Connector F1 and F2

1. Following the Type 10 FPB wiring list interconnect F1, F2, A3 and A5. Drawing No. 310-9 indicates the correct method of wiring to and insulating terminals and connectors F1 and F2.
2. All unused pins of F1, F2, A3 and A5 must be covered with shrink tubing.

D. Light Emitting Diodes L1 and L2
1. Following the Type 10 FPB Wiring List, wire wrap and solder to LED terminals then cover with shrink tubing and wire to the FPB Rear Connector A5 and to Astro Connector D6. Note that 1L1 and 1L2 (Double Shouldered Pins) are tied together and a single wire then goes to D6. Note orientation on drawing No. 310-8.

E. Switches S1, S2, S3, S4
1. Following the Type 10 FPB Wiring List, wire Switches to the FPB Rear Connectors A3 and A5. See drawing No. 310-8 for orientation.

F. Assembly of Rear Connectors A3 and A5
1. Slip the FPB Key onto the V-bus Subassembly Connector Brackets and mount the FPB Rear Connector A5 using two Connector Bracket Screws. Note the orientation on drawing No. 310-11.

2. Mount Connector A3 and Type 10 Filler Strip to Connector Brackets (part No. 300.5-2.) See drawing No. 310-11.

G. Final Assembly (See page 310-6)
1. Remove the screws holding the topmost and bottommost Cover Plate pair to the 2-cell FPB Shell Struts. Remove these Cover Plates with their respective Overlay Clips.

2. Slip the Rear Connector Blocks of the two connector assemblies into the slot provided in the Struts for the Connector Bracket. See drawing No. 310-11. Replace Cover Plate pair and attach the Type 10 Faceplate to front using the remaining 2-56 screws.

3. Take care to assure that the wires are not pinched in this assembly.
3/16 x 2-56 FILLISTER HEAD STRUT SCREWS (4)

3/16 x 2-56 FILLISTER HEAD SCREWS FOR ASTRO STANDOFFS (24)

TYPE 10 FACEPLATE
(PART NO. 300.5-25)

Viking Polarizing Key

Viking Polarizing Key

Switch levers must not extend outward more than .128 inch
Wires from pins on row A must be placed between pins on row B.

Shrink tubing must be cut even with top of pins.

After soldering wires must be placed down the pin and brought out lying flat on the connector.

Note:
When soldering care must be taken not to injure the wire insulation placed between the pins on row B.

A solution would be to solder wires on row B before placing wires between pins.
FPT10WL.1 LN=1

C TYPE TEN FACEPLATE BOX WIRING LIST
C
C >>>>>>>>>>>>>>>>>>>>
# 1A3 3AF1E RED
# 5A3 2 TWO WIRES 3BF1E SLATE
# >>>>>>>>>>>>>>>>>>>>
# 2A3 2AF1E WHITE
# 5A3 2 TWO WIRES 2BF1E BLUE
# >>>>>>>>>>>>>>>>>>>>
# 3A3 5AF1E WHITE
# 6A3 2 TWO WIRES 5BF1E GREEN
# >>>>>>>>>>>>>>>>>>>>
# 4A3 4AF1E YELLOW
# 6A3 2 TWO WIRES 4BF1E BROWN
# >>>>>>>>>>>>>>>>>>>>
C TWO WIRES ARE SOLDERED TO PIN 7A3
C 7A3 2BF1E BLUE 2BF2E BLUE
# >>>>>>>>>>>>>>>>>>>>
C THREE SIX INCH WIRES WITH GROUND LUGS SOLDERED TO PIN 8A3
C 8A3 D1 D2
# >>>>>>>>>>>>>>>>>>>>
9A3 19D4 1 BLUE
# 10A3 18D4 1 VIOLET
# >>>>>>>>>>>>>>>>>>>>

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310-12
2403 C ORANGE
#
28A3
23D3 C RED
#
29A3
32D6 C RED
#
30A3
33D6 C BLUE
#
31A3
32D3 C RED
#
32A3
33D6 C BLUE
#
33A3
26D6 C BROWN
#
34A3
25D6 C RED
#
35A3
26D3 C BROWN
#
36A3
25D3 C RED
#
37A3
28D6 C SLATE
#
38A3
27D6 C WHITE
#
39A3
28D3 C SLATE
#
40A3
27D3 C WHITE
#
41A3
21D6 C BROWN
#
42A3
20D6 C YELLOW
#
43A3
21D3 C BROWN
FPT10WL.4  LN=254

# 44A3
20D3 C YELLOW
#
>>>>
45A3
16D6 C YELLOW
#
46A3
17D6 C GREEN
#
>>>>
47A3
16D3 C YELLOW
#
48A3
17D3 C GREEN
#
>>>>
49A3
11D6 C BROWN
#
50A3
10D6 C WHITE
#
>>>>
51A3
11D3 C BROWN
#
52A3
10D3 C WHITE
#
>>>>
53A3
13D6 C GREEN
#
54A3
12D6 C WHITE
#
>>>>
55A3
13D3 C GREEN
#
56A3
12D3 C WHITE
#
>>>>
57A3
9D6 C ORANGE
#
58A3
8D6 C WHITE
#
>>>>
59A3
9D3 C ORANGE
#
60A3
8D3 [ WHITE
#

61A3
14D6 [ RED
#

62A3
15D6 [ GREEN
#

63A3
14D3 [ RED
#

64A3
15D3 [ GREEN
#

65A3
36D2 [ YELLOW
#

66A3
37D2 [ ORANGE
#

67A3
30D2 [ YELLOW
#

68A3
31D2 [ SLATE
#

69A3
32D2 [ RED
#

70A3
33D2 [ BLUE
#

71A3
23D2 [ RED
#

72A3
24D2 [ ORANGE
#

73A3
19D2 [ BLUE
#

74A3
18D2 [ VIOLET
#

75A3
6D2 [ VIOLET
#

76A3
FP10WL,6 LN=436

7D2 [ ORANGE
#
>------------------------------------------------------------------
C
TEN WIRES ARE SOLDERED TO PIN 77A3
C
77A3
5D1 [ YELLOW
5D2 [ YELLOW
5D3 [ YELLOW
5D4 [ YELLOW
5D5 [ YELLOW
5D6 [ YELLOW
1L1 [ NOTE-DOUBLE SHOULDER
1L2 [ NOTE-DOUBLE SHOULDER
1AF1 [ YELLOW
1AF2 [ YELLOW
#
>------------------------------------------------------------------
C
THREE SIX INCH WIRES WITH GROUND LUGS SOLDER TO PIN 78A3
C
78A3
D4
D5
D6
#
>------------------------------------------------------------------
79A3
8BF2C SLATE
#
80A3
8AF2C WHITE
#
>------------------------------------------------------------------
81A3
8AF1C WHITE
#
82A3
8BF1C SLATE
#
>------------------------------------------------------------------
83A3
3AF2C RED
#
88A3 [ TWO WIRES
3BF2C SLATE
#
>------------------------------------------------------------------
84A3
2AF2C WHITE
#
88A3 [ TWO WIRES
2BF2C BLUE
#
>------------------------------------------------------------------
85A3
FPT10WL.7  LN=527

5AF2C  WHITE
#
90A3  [TWO WIRES
5BF2C  GREEN
#

86A3
4AF2C  YELLOW
#
90A3  [TWO WIRES
4BF2C  BROWN
#

87A3
2S1
#

89A3 TO THE FOLLOWING
C

89A3
3S1
1S2
1S3
1S4
#

1A5
7D6  [ ORANGE
#
2A5
6D6  [ VIOLET
#

3A5
19D6  [ BLUE
#
4A5
18D6  [ VIOLET
#

5A5
6D3  [ VIOLET
#
6A5
7D3  [ ORANGE
#

7A5
19D3  [ BLUE
#
8A5
18D3  [ VIOLET
#

9A5
28D4  [ SLATE
# 10A5 27D4 | WHITE
# >>>>>>>>>>>>>>>>
11A5  26D4 | BROWN
# 12A5  25D4 | RED
# >>>>>>>>>>>>>>>>
13A5  24D4 | ORANGE
# 14A5  23D4 | RED
# >>>>>>>>>>>>>>>>
15A5  33D4 | BLUE
# 16A5  32D4 | RED
# >>>>>>>>>>>>>>>>
17A5  31D4 | SLATE
# 18A5  30D4 | YELLOW
# >>>>>>>>>>>>>>>>
19A5  37D4 | ORANGE
# 20A5  36D4 | YELLOW
# >>>>>>>>>>>>>>>>
21A5  36D5 | YELLOW
# 22A5  37D5 | ORANGE
# >>>>>>>>>>>>>>>>
23A5  31D5 | SLATE
# 24A5  30D5 | YELLOW
# >>>>>>>>>>>>>>>>
25A5  24D5 | ORANGE
FP10WL.12  LN=1002

26D5 [ BROWN
#
>>>>
43A5
28D5 [ SLATE
#
44A5
27D5 [ WHITE
#
>>>>
45A5
21D5 [ BROWN
#
46A5
20D5 [ YELLOW
#
>>>>
47A5
16D5 [ YELLOW
#
48A5
17D5 [ GREEN
#
>>>>
49A5
28D1 [ SLATE
#
50A5
27D1 [ WHITE
#
>>>>
51A5
26D1 [ BROWN
#
52A5
25D1 [ RED
#
>>>>
53A5
24D1 [ ORANGE
#
54A5
23D1 [ RED
#
>>>>
55A5
37D1 [ ORANGE
#
56A5
36D1 [ YELLOW
#
>>>>
57A5
31D1 [ SLATE
#
58A5
30D1 [ YELLOW
FP10WL.14  LN=1164

75A5  2S3
#
76A5  [NO CONNECTION]
#
77A5  [NO CONNECTION]
#
78A5  2L2  [NOTE-SINGLE SHOULDER]
#
79A5  2S4
#
80A5  2S2
#
81A5  9BF1C  BLUE
#
82A5  9AF1C  WHITE
#
83A5  9BF2C  BLUE
#
84A5  9AF2C  WHITE
#
85A5  10AF1C  WHITE
#
86A5  10BF1C  GREEN
#
87A5  10AF2C  WHITE
#
88A5  10BF2C  GREEN
#
89A5  [THREE SIX INCH WIRES SOLDER TO PIN 89A5]
  22D1  [BLUE]
  22D2  [BLUE]
FPT10WL:15  LN=1255

  22D3  C  BLUE
#  >>>>>>>>>>>>>>>>>>

[THREE SIX INCH WIRES SOLDER TO PIN 90A5]

  90A5
  22D4  C  BLUE
  22D5  C  BLUE
  22D6  C  BLUE
#
  >>>>>>>>>>>>>>>>>>

[CFPT10WL]
**FACEPLATE BOXES, TYPES 5 THROUGH 10**

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**ABSTRACT**

This document contains the necessary procedures and wiring lists for the assembly of Macro-Module Faceplate Box types 5 through 10.
<table>
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<tr>
<th>KEY WORDS</th>
<th>LINK A</th>
<th>LINK B</th>
<th>LINK C</th>
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<tbody>
<tr>
<td>Macromodule Faceplate Box</td>
<td>ROLE</td>
<td>WT</td>
<td>ROLE</td>
</tr>
</tbody>
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